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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,398	04/01/2004	John D. Langley	045221/275977	9608
826	7590	11/14/2005	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/816,398

Applicant(s)

LANGLEY ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period, for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 34-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 and 38-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/1/05</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-33 and 38-40, drawn to a chemically resistant, radiation attenuation barrier fabric, classified in class 442, subclass 131.
- II. Claims 34-37, drawn to a method of making a chemically resistant, radiation attenuation barrier, classified in class 156, various subclasses.

The inventions are distinct, each from the other because of the following reasons:

1. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are both directed to chemically resistant radiation attenuation composite barrier fabrics, but the method disclosed in invention II includes the use of a mixture of a polymer matrix and a radiation attenuant. Invention I only recites a radiation attenuation layer, but silent as to its chemical composition.
2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Raymond Linker Jr. on 10/6/2005 a provisional election was made with traverse to prosecute the invention of a chemically resistant, radiation attenuation barrier fabric, claims 1-33 and 38-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims 34-37 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-18 and 38-40 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a chemically resistant, radiation attenuation composite barrier fabric (refer to pages 7-10 of the Specification), does not reasonably provide enablement for claimed chemically resistant, radiation attenuation composite barrier fabric defined by the specific desired properties made by materials other than the ones disclosed in the Specification. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The product claims of the present invention are claiming the product by the properties that they are

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seeking in the absorbent article. It seems that the applicants are attempting to obtain patent protection on a final product made of a non-existent process that may be made some day in the future, but only provides guidance on how to make the final product by a specifically disclosed process.

The specification does not provide enablement for one of ordinary skill in the art that is reasonably commensurate in scope with the properties sought by the claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-18 and 38-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 1 recites physical properties of a chemically resistant, radiation attenuation composite barrier fabric (i.e. a fabric having at least 8 hours resistance to military chemical agents and passes ASTM F1671). Dependent claims 2, 3 and 8-10 recite physical properties of a chemically resistant, radiation attenuation composite barrier fabric (i.e. permeation efficiency when exposed to the 15 liquid chemicals included on ASTM F1001, an attenuation factor of at least 50% of a primary 100kVp x-ray beam permeation efficiency when exposed to the chemicals included on ASTM F1001).

8. Ex parte Slob, 157 USPQ states the following with regard to an article claimed by defining property values:

Claims merely setting forth physical characteristics desired in article, and not setting forth specific compositions, which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics, thus, expression "a liquefiable substance having a liquification temperature from 40°C to about 300°C and being compatible with the ingredients in the powdered detergent composition" is too broad and indefinite since it purports to cover everything which will perform the desired functions regardless of its composition, and in effect, recites compositions by what it is desired that they do rather than what they are;

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expression also is too broad since it appears to read upon materials that could not possibly be used to accomplish purposes intended.

9. Thus, claims 1-18 and 38-40 are indefinite for reciting only the desired physical properties of a chemically resistant, radiation attenuation composite barrier fabric, rather than setting forth structural and/or chemical characteristics of said chemically resistant, radiation attenuation composite barrier fabric.

10. Claims 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claims recite "EMF". Applicant is directed to amend said claims to recite "electromagnetic fields". For examination purposes, Examiner has interpreted EMF to mean "electromagnetic fields".

11. Claims 1-33 and 38-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite as they fail to explicitly claim what type of radiation instant attenuation composite barrier fabric is intended to affect.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-4, 8-15 and 38-40 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Langley et al. (US 5,948,708).

- a. Langley et al. teach a multi-layer composite consisting a chemical barrier layer 12, a flame resistant layer 13, and a reflective layer 14 (Figure 3). The chemical barrier layer is itself a composite material having multiple substrates (Abstract). The Examiner equates the reflective layer to the claimed radiation attenuation layer as the applied layer is designed to prevent radiant energy from reaching the internal flame and chemical barrier layers (col. 3, lines 20-22). The reflective layer may be metallized polyethylene terephthalate (col. 3, lines 18-20).
- b. The chemical barrier layer comprises multiple layers and may include a polyethylene co-extruded film layer (col. 5, line 58- col. 6, line 8). Claim 11 is rejected as polyethylene is heat-sealable. The chemical resistant layer 12 as illustrated in Figure 3 comprises a multitude of layers, any of which may serve as an additional reinforcing layer and may be made of the chemical compositions listed in claim 1 (col. 3, line 66-col. 4, line 15). The additional reinforcing layer may be adhered to the composite fabric via thermal lamination (col. 4, lines 18-22).
- c. Claims 38-40 are rejected as the applied composite is used to create a chemical protection suit which is self-protecting against fires that expose it wearer to toxic vapors (col. 3, lines 25-29).

***Claim Rejections - 35 USC § 103***

13. Claims 5-7, 16, 18 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langley et al. (US 5,948,708) as applied to claims 4 above, and further in view of Chapman et al. (US 4,965,408) and Shah et al. (US 5,245,195). The invention of Langley et al. is silent as to the use of barium in a polymeric layer to provide radiation attenuation.

- a. Chapman et al. teach a composite sheet material for electromagnetic radiation shielding comprising a layer of polymeric or co-polymeric film, a layer of metal foil, and a layer of adhesive to bond the aforementioned layers. An optional backing layer may be bonded to the sheet to provide further support for the article (Abstract). The support layer may be made of synthetic nonwoven polypropylene (col. 4, lines 18-24). It is desirable that the support layer also serves as a flame retardant or flame resistant material (col. 4, lines 23-25). The article of Chapman et al. is silent as to use of barium for radiation attenuation and the incorporation of antimicrobial and biocides in the protective article.
- b. Shah et al. teach that in the field of radiation attenuation, a film of elastomeric elastomer containing from about 60 to 90 weight percent of barium sulfate or barium salts is equivalent to metal foils (Abstract). The filled polymer film of Shah et al. is formed from thermoplastic elastomer, barium salt, and may include antimicrobials and biocides and flame-retardants (col. 2, lines 33-40).
- c. Since Langley et al. and Chapman et al. and Chapman et al. and Shah et al. are from the same field of endeavor (protective articles comprising flame/fire retardancy and radiation attenuation composites, respectively), the purposes disclosed by Chapman et al. and Shah et al. would have been recognized in the pertinent art of Langley et al.
- d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have replaced the reflective layer of Langley et al. article with the electromagnetic radiation shielding composite of Chapman et al. with the outermost layer comprising the polymer filled barium, antimicrobials and biocides of Shah et al.



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with the motivation of creation a radiation attenuation article that is also chemically and fire resistant.

e. Claim 19 is rejected as the chemically-resistant composite comprises at least two layer of different composition (col. 3, line 66 – col. 4, line 9). Claim 20 is rejected as the use of a coextruded film to serve as a chemical barrier layer and is heat sealable (col. 5, lines 63-65). Claim 3 recites the use of an adhesive tie layer between the radiation attenuation layer and the chemical barrier layer, thereby rejecting claim 23.

***Allowable Subject Matter***

14. Claims 17 and 25-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claims 17 and 25-33 would be in condition for allowance because the prior art does not teach the use of organophosphate hydrolase enzyme and/or oxidizing polymer along with radiation and chemical barrier article or a chemically resistant radiation attenuation composite barrier fabric comprising a polymer matrix and a radiation attenuant and an electromagnetic shielding ply. The article of claim 27 would be in condition of allowance because the prior art fails to teach a barrier fabric comprising a polyolefin matrix containing 40-80% barium sulfate with a spunbond polypropylene supporting substrate and a chemical barrier.

15. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

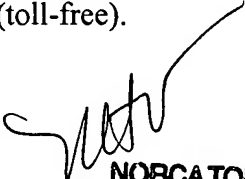
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm

  
**NORCA TORRES**  
**PRIMARY EXAMINER**